**Circulatory System**

* **Heart** - left atrium, left ventricle, aorta, coronary arteries, vena cava, right atrium, right ventricle, pulmonary arteries, sinoatrial node.
* Blood Vessels - arteries, capillaries, veins.
* **Blood** - plasma, hemoglobin, red blood cells, white blood cells, platelets.
* Blood Type - A, B, AB, O, Rh factor.
* Transport Materials - blood pressure, O2, CO2, hormones, food nutrients, distributes heat.

**Digestive System**

* Mouth - canine teeth, incisor teeth, salivary glands, saliva, amylase enzyme.
* Esophagus - peristaltic contractions.
* **Stomach** - sphincter, gastric juices, hydrochloric acids, pepsin enzyme.
* **Small Intestine** - nutrient digestion, nutrient absorbtion, duodenum, gallbladder, bile, liver, blood sugar, pancreas, lipase enzyme, villi, microvilli.
* **Large Intestine** - colon, aborb water, feces.

**Endocrine System**

* Endocrine Glands - adrenal, hypothalamus, parathyroid, pineal, pituitary, thymus, thyroid, overy or testis.
* Pancreas - islets of Langerhans, insulin, glucogon.
* **Homeostasis** - negative feeback mechanisms, positive feedback loops.
* **Hormones** - amino acid based hormones, steroid homones, thyroid hormones, receptor proteins.

**Immune System**

* Nonspecific - barrier, chemical, phagocytosis, inflammation, fever, interferon, white blood cells.
* Barrier - skin, mucous membranes.
* Chemical - lysozyme, lactic acid, hydrochloric acid, spermine.
* Phagocytosis - phagocyte, bacterium, lysosome, egestion.
* Inflammation - swelling of blood, histamine.
* Fever - slow bacteria growth, pyrogens.
* Interferon - stimulate non-infected cells, stop viral replication.
* **White Blood Cells** - neutrophils, macrophages, natural killer cells.
* Specific - antigens, humoral immunity, cell mediated immunity.
* **Antigens** - foriegn substances, start **immune response**.
* Humoral Immunity - immune response, **antibody**, B-cells, B-lymphocytes, viral inhibition, neutralization, agglutination, preceipitation, macrophage, phagocytosis.
* Cell Mediated Immunty - T lymphocytes, cytotoxic T cells, helper T cells, interleukin.

**Integrumentary Systems**

* **Skin** - epidermis, dead keratin cells, dermis, subcutaneous tissues.
* Regulate Temperature - blood vessels, sweat glands.
* Hair - insulation, dead keratin cells.
* Nails - protect tips of fingers and toes.

**Lymphatic System**

* Capillaries fluid loss - fluid that does not go back into the capillaries is pick-up and recycled.
* Parts - **Lymph nodes**, lymphatic vessels, bone marrow, spleen, tonsils, thymus.

**Muscular System**

 Movement - tendons, flexor, extensor.

 **Muscle** Contraction - myofibril, sarcomere, z lines, actin, myosin, binding sites

**Nervous System**

* **Neuron** - nerve, nucleus, cell body, dendrites, axon, myelin sheath, nodes of Ranvier, axon terminals.
* Action Potential - membrane potential, sodium potassium pumps, K+, Na+, nerve impulse.
* **Neurotransmitters** - synapse, presynaptic neuron, postsynaptic neuron.
* Neuron Types - sensory neurons, motor neurons, interneurons.
* **Central Nervous System** - brain, spinal cord.
* Brain - corpus callosum, cerebral cortex, limbic system, brain stem.
* **Cerebral Cortex** - outer cerebrum, processing senses, gray matter.
* Limbic System - inner **cerebrum**, **cerebullum**, thalamus, hypothalamus, emotions, memory.
* Lower **Brain Stem** - midbrain, pons, medulla oblongata.
* **Peripheral Nervous System** - cranial nerves, spinal nerves, ganglia, somatic nervous system, autonomic nervous system.
* Sensory Receotors - chemoreceptors, mechanoreceptors, pain receptors, photoreceptors, thermnoreceptors.

**Nutrition**

* Nutrients - types of carbohydrates, types of proteins, types of fats, water.
* Vitamins & Minerals - fat soluble, water soluble, sources and functions.
* Calorie - metabolic rate, caloric values, daily intake.

**Reproductive System**

* **Male Reproductive System** - testes, seminiferous tubules, epididymis, vas deferens, urethra, penis.
* Semen - sperm cells, seminal vesicles, prostate gland, bulbourethral glands.
* **Female Reproductive System** - ovary, fallopian tube, uterus, cervix, vagina.
* **Hormones** - estrogen, follicle-stimulating, luteinizing, progesterone.
* Ovarian and Menstrual Cycles - follicular phase, ovulation, luteal phase, lining of the uterus, menstruation.
* Gestation - cleavage, blastocyst, implantation, embryo, placenta, fetus, umbilical cord.

**Respiratory System**

* **Lungs** - bronchioles, alveoli, diaphragm.
* Air Flow - nose, pharynx, larynx, trachea, bronchi.
* Air Transport - O2, CO2, HCO3 ions, diffusion.

**Skeletal System**

* **Axial Skeleton** - skull, spine, ribs, sternum.
* **Appendicular Skeleton** - arms, feet, hands, legs, pelvis, shoulder.
* Bone Structure - bone marrow, peiosteum, Haversian canals, osteocytes.
* Joints - ligaments, ball-and-socket joints, gliding joint, hinge joint, pivot joint, saddle joint.

**Urinary System**

* **Kidneys** - nephrons, glomerulus, Bowman's capsule, loop of Henle, kidney dialysis.
* Bladder - ureters, urine, urethra.
* **Liver** - nitrogen waste, ammonia, urea.